TITLE OF INVENTION: CONGESTION CONTROL IN A WIRELESS DATA NETWORK

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

23696 7590 06/18/2009 QUALCOMM INCORPORATED 5775 MOREHOUSE DR.

SAN DIEGO, CA 92121

EXAMINER

BOAKYE, ALEXANDER O

ART UNIT PAPER NUMBER

2416

DATE MAILED: 06/18/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,242	08/22/2003	Sandip Sarkar	030244	9397

 APPLN. TYPE
 SMALL ENTITY
 ISSUE FEE DUE
 PUBLICATION FEE DUE
 PREV. PAID ISSUE FEE
 TOTAL FEES) DUE
 DATE DUE

 nonprovisional
 NO
 \$1510
 \$300
 \$0
 \$1810
 09/18/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 1SI. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and I/2 the ISSUE FIEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where

appropriate. All further indicated unless corrects maintenance fee notifica	correspondence includir ed below or directed oth	of transmitting the 13 ng the Patent, advance nerwise in Block 1, by	orders and notification of (a) specifying a new cor	f maintenance fees v respondence address	vill be ; and/o	mailed to the current or (b) indicating a sepa	correspondence address as trate "FEE ADDRESS" for
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							(Date)
APPLICATION NO.	FILING DATE		FIRST NAMED INVENTO	OR	ATTC	ORNEY DOCKET NO.	CONFIRMATION NO.
10/646,242	08/22/2003		Sandip Sarkar			030244	9397
TITLE OF INVENTION	: CONGESTION CONT	ROL IN A WIRELESS	DATA NETWORK				
APPLN, TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DU	E PREV. PAID ISSU	E FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0		\$1810	09/18/2009
EXAM	IINER	ART UNIT	CLASS-SUBCLASS	7			
BOAKYE, AL	EXANDER O	2416	370-331000	_			
1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). ☐ Change of correspondence address (or Change of Correspondence Address form PTOVSB/122) attached. ☐ "Fee Address" indication for "Fee Address" Indication form PTOVSB/12 Rev 03-02 or more recent) attached. Use of a Custome Number is required.			(I) the names of up or agents OR, altern (2) the name of a sin	f a single firm (having as a member a ricey or agent) and the names of up to tent attorneys or agents. If no name is			
	less an assignee is ident h in 37 CFR 3.11. Comp GNEE	ified below, no assign eletion of this form is N	(B) RESIDENCE: (CI	patent. If an assign an assignment. TY and STATE OR C	COUN	IRY)	ocument has been filed for
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- 11	s SMALL ENTITY state	is. See 37 CFR I.27.				TITY status. Sec 37 Ci	
NOTE: The Issue Fee an interest as shown by the	d Publication Fee (if req records of the United Sta	uired) will not be accep tes Patent and Tradema	ted from anyone other tha rk Office.	n the applicant; a reg	istered	attorney or agent; or th	ne assignee or other party in
Authorized Signature				Date			
Typed or printed nam	e			Registration N	No		
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PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandra, Virgima 22313-1450 www.uspto.gov

DATE MAILED: 06/18/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,242	546,242 08/22/2003 Sandip Sarkar		030244	9397
23696 75	90 06/18/2009		EXAM	UNER
QUALCOMM INCORPORATED 5775 MOREHOUSE DR.		BOAKYE, ALEXANDER O		
		ART UNIT	PAPER NUMBER	
SAN DIEGO, CA	2121		2416	

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 151 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 151 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.	Applicant(s)	
application ito.	Applicant(c)	
10/040 040	SARKAR, SANDIP	
10/646,242	SARKAR, SANDIP	
Examiner	Art Unit	
= Xallillei	AILOIIL	
ALEYANDER BOAKVE	2/16	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address-All claims being allowable, PROSECUTION ON THE MERTIS IS (OR REMAINS) CLOSED in this application. If not included
herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS
NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative
of the Office or upon petition by the applicant. See 37 CFR 133 and MPEP 1308.

- 1. This communication is responsive to 05/26/2009.
- The allowed claim(s) is/are 1,3,4,10-32,34-46,48,52,2,5-8,53-54,55-58; 1-52 respectively..
- 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some* c) None of the:
 - 1.

 Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____
 - Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- 5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) Thereto or 2) to Paper No./Mail Date _____
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

 DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2.
 Notice of Draftperson's Patent Drawing Review (PTO-948)
- Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 05/26/2009; 05/02/2005
- Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5.

 Notice of Informal Patent Application
- Interview Summary (PTO-413), Paper No./Mail Date
- 7. Examiner's Amendment/Comment
- 8. X Examiner's Statement of Reasons for Allowance
- 9. 🗌 Other ___

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REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance: Claims 1-8, 10-32, 34-46, 48, 52-58 are considered allowable since when reading the claims in light of the specification, none of the references of record alone or in combination disclose or suggest the combination of limitations specified in the independent claims. As to claims 1, the prior art of record does not teach generating a busy command based at least in part on the measured utilization by other remote stations of the shared resource. As to claims 3, 4, the prior art of record does not teach a transmitter for transmitting the common access grant to the remaining remote stations on one or more common grant channels and for transmitting a busy signal comprising one or more busy commands.

As to claims 10, 11, 15-17, 55, 56, 57, 58, the prior art of record does not teach a receiver for receiving one or more common grant channels from a base station and for receiving a busy signal based at least in part on a measured utilization by other remote stations of a shared resource from the base station. As to claim 12,the prior art of record does not teach wherein the receiver further receives an ACK-and-Continue command; and the transmitter transmits an additional portion of data from the data buffer in response to a previously decoded access grant, responsive to the received busy signal.

As to claim 13, the prior art of record does not teach wherein the transmitter further transmits a limited portion of the data in the data buffer autonomously, irrespective of whether an access grant has been received, respective to the received busy signal. As to claim 14 and 38, the prior art of record does not teach wherein the receiver further receives a NAK command; and the transmitter retransmits the portion of data from the data buffer previously transmitted in response to a previously decoded access grant, responsive to the received busy signal. As to claims 18-21, the prior art

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of record does not teach a receiver for receiving one or more common grant channels from a base station and for receiving a busy signal based at least in part on a measured utilization by other remote stations of a shared resource from the base station.

As to claims 22-24 and 25-32, the prior art of record does not teach transmitting a busy signal when the measured utilization exceeds a predetermined threshold. As to claim 34, the prior art of record does not teach decoding an access grant comprising a common grant on one of the one or more common grant channels; receiving one or more individual grant channels; and wherein the access grant alternately comprises an individual grant directed on one of the one or more individual grant channels. As to claim 35, the prior art of record does not teach transmitting a limited portion of the data in the data buffer autonomously, irrespective of whether an access grant has been received, responsive to the received busy signal. As to claim 36, the prior art of record does not teach receiving an ACK-and-Continue command; and transmitting an additional portion of data from the data buffer in responsive to a previously decoded access grant adapted to the received busy signal.

As to claim 37, the prior art of record does not teach transmitting a limited portion of the data in the data buffer autonomously, subsequent to a received ACK, responsive to the received busy signal. As to claim 38, the prior art of record does not teach decoding an access grant comprising a common grant on one of the one or more common grant channels; and transmitting a portion of data from the data buffer in response to a decoded access grant adapted in accordance with the received busy signal. As to claims 39-41 and 42-45, the prior art of record does not teach receiving a busy signal from the base station, wherein the busy signal is based at least in part on a measured utilization by other remote stations of a shared resource.

As to claims 46, 48, the prior art of record does not teach means for transmitting the common access grant to the remaining remote stations on one or more common grant channels; means for measuring the utilization of the shared resource; and means for transmitting a busy signal when the measured utilization exceeds a predetermined

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threshold. As to claims 52-54, 2, 5-8, the prior art of record does not teach generating a busy command when the measured utilization exceeds a predetermined threshold; and a transmitter for transmitting the common access grant to the remaining remote stations on one or more common grant channels and for transmitting a busy signal comprising one or more busy commands. Furthermore, claims 50 and 59 had been canceled by the examiner's amendment dated 02/13/2009. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Boakye whose telephone number is (571) 272-3183. The examiner can normally be reached on M-F from 8:30am to 6:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (571) 272-3179. The Fax number is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR)system. Status information for published applications may be obtained from either Private PAIR or PUBLIC PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http-//pair-direct.uspto.gov. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Electronic Business Center (EBC) numbers at 866-217-9197 and 703-305-3028.

/ALEXANDER BOAKYE/

Examiner, Art Unit 2416

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6/08/2009

/Chi H Pham/

Supervisory Patent Examiner, Art Unit 2416

6/9/09